

### Claims

Please amend Claim 1 as follows:

1. *(Currently amended)* A remote video surveillance server comprising:
  - a number of channel interface units respectively coupled to a plurality of field terminals for ~~receiving-transporting~~ video, audio and alarm data in a surveillance site ~~and transmitting the video and audio data and control information from to~~ a plurality of view stations ~~to said field terminals~~ respectively, wherein the video and audio data are transported over a network and the alarm data is transported over a dedicated E1 channel, the field terminals generate video signals that are respectively digitalized, encoded and compressed to form the video and audio data, and wherein each of said channel interface units comprises:
    - a) a number of channel transceiver chips to communicate with said field terminals, connected to a logic control module through a data line and a clock line, for transmitting/receiving signals from a channel;
    - b) a logic control module including a number of programmable devices, a single chip processor and a memory for receiving data from said channel transceiver chips through the data line and the clock line and transmitting data to said channel transceiver chips, moreover, for receiving the data from the bus control module through the data line and the address line and transmitting the data to the bus control module, wherein said memory is connected to said programmable devices for buffering the data received from said channel transceiver and the data received from said bus control module; and
    - c) a bus control module with one end connected to said logic control module and another end connected to a computer bus;
  - an information process kernel including a processor and a software module and connected to said channel interface unit by said computer

bus; and  
a number of view station interface units respectively coupled to said information process kernel by said computer bus to receive the video and audio data, wherein the video and audio data are decompressed, decoded and subsequently displayed on the view stations.

2. *(Previously amended)* The remote video surveillance server in accordance with claim 1, wherein each of said channel interface units further comprises:

two channel transceiver chips and,

programmable devices,

the memory devices , and

a single chip processor, wherein said channel transceiver chips are connected to said programmable devices respectively through a transmitting clock line Tck, transmitting data line TxD and receiving clock line Rck, receiving data line RxD, said programmable devices are connected to said memory devices respectively through a DATA BUS and an AD BUS, said memory devices are connected to said programmable devices respectively through the DATA BUS and the AD BUS , said programmable devices are connected to the I/O bus in said single chip processor (CPU), and also connected to the DATA BUS and the AD BUS in a computer bus control chip, said single chip processor (CPU) is connected to the control bus and the status bus in said computer bus control chip through its I/O bus, and said computer bus control chip is connected to said computer bus.

3. *(Previously amended)* The remote video surveillance server in accordance with claim 2, wherein said channel transceiver chip is an E1 or a DDN or an ISDN transceiver chip, said programmable device is a CPLD or a FPGA or a DSP, said memory is a single chip dual-ported RAM or a two chips RAM, said computer bus is an ISA bus or a PCI bus.

4. *(Previously added)* The remote video surveillance server in accordance with claim 1, wherein said channel transceiver chip is an E1 or a DDN or an ISDN transceiver chip, said programmable device is a CPLD or a FPGA or a DSP, said memory is a single chip dual-ported RAM or a two chips RAM, said computer bus is an ISA bus or a PCI bus.

5. *(Currently amended)* A remote video surveillance server comprising:

a number of channel interfaces units, each of the channel interfaces units coupled to a field terminal and receiving data over a data network from the field terminal, wherein each of the channel interfaces units comprises at least a channel transceiver to communicate with the field terminal and buffer the data in a memory, the field terminal produces ~~at least a~~ audio and video analog signals that is are respectively digitalized, encoded and compressed to form part of the data, and wherein the field terminal data further produces include audio and alarm information that is transported in a separated data channel generated from the field terminal;

a network interface coupled to the data network; and

an information process kernel coupled between the channel interfaces units and the network interface, the information process kernel executing instructions to ~~process the data in the memory for~~ transporting the data over the data network and the alarm information in the separated data channel, wherein a number of view stations are coupled to the data network to receive the data for display thereon and the alarm information for immediate attention.

6. *(Original)* The remote video surveillance server of claim 5, wherein each of the channel interfaces units further comprises:

at least one channel transceiver chip;

at least one programmable device;

a processor, coupled to the at least one channel transceiver chip and the at least one programmable device and controlled under a clock signal, for synchronizing the at least one channel transceiver chip and the at least one programmable device to

cause the data to be transferred into the memory and read the data out of the memory onto a data bus when one of the view stations is controlled to display the data.

7. *(Previously amended)* The remote video surveillance server of claim 5, wherein the data network is one or more of Ethernet (E1) and local area network (LAN).

8. *(Original)* The remote video surveillance server of claim 7, wherein the network interface formats the data for transmission over the data network in accordance with a standard supported by the data network.

9. *(Original)* The remote video surveillance server of claim 6, wherein the instructions when executed causes the processor to:

- write the data to a PCI bus;
- map an address on the PCI bus to an internal bus through an address mapping register; and
- store the data in the memory when the internal bus is detected idle.

10. *(Original)* The remote video surveillance server of claim 9, wherein the instructions when executed causes the processor further to:

- read the data out the memory when receiving a data channel number identifying the field terminal; and
- transmit the data over the data network through the network interface.

11. *(Original)* The remote video surveillance server of claim 10, wherein the memory is a dual-ported random access memory.

12. *(Original)* The remote video surveillance server of claim 5, wherein the data represents audio and video signals from the field terminal.

13. *(Original)* The remote video surveillance server of claim 12, wherein the data

further include an alarm signal that causes the data to be transmitted to one of the view stations for display.

14. *(Original)* The remote video surveillance server of claim 5, wherein the field terminal is remotely located with respect to the view stations.